

CLAIMS

1. Use of an adenovirus for cancer treatment characterized by the fact that the adenovirus is defective in its VAI and VAII virus-associated RNAs.

5 2. Use according to Claim 1, in which said adenovirus has a mutation in the sequences of the VAI and VAII RNA genes.

3. Use according to Claim 1, in which said adenovirus has a mutation in the sequences that control the expression  
10 of the VAI and VAII RNA genes.

4. Use according to any of the above claims in which said adenovirus is injected into the tumor, into a cavity where the tumor is located, or into the bloodstream of a cancer patient.

15 5. Use according to any of the above claims in which said adenovirus is combined with other cancer treatment modalities such as chemotherapy or radiation therapy.

6. A composition that comprises an adenovirus with genetic mutations in the VA RNA genes to obtain selective  
20 replication in tumor cells with an active Ras pathway or unresponsive to the action of interferon.

7. A composition to be used according to Claims 1 to 3 that comprises an adenovirus with genetic mutations in the VA RNA genes in one or more genes of the group Ela, Elb,  
25 and E4 to obtain selective replication in tumors.

8. A composition to be used according to Claims 1 to 3 that comprises an adenovirus with genetic mutations in the VA RNA genes and, in turn, promoters that regulate one or

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1. Use of an adenovirus defective in its VAI and VAII virus-associated RNAs for the production of a pharmaceutical composition for the treatment of cancer.

5        2. Use according to Claim 1, wherein said adenovirus has a mutation in the sequences of the VAI and VAII RNA genes.

3. Use according to Claim 1, wherein said adenovirus has a mutation in the sequences of the genes that control  
10 the expression of the VAI and VAII RNA genes.

4. Use according to any one of the preceding claims, wherein said adenovirus has mutations in the VA RNA genes in one or more genes of the group Ela, Elb, and E4 to obtain selective replication in tumors.

15        5. Use according to any one of the preceding claims, wherein said adenovirus has mutations in the VA RNA genes and promoters that regulate one or more genes in the group Ela, Elb, and E4 to obtain selective replication in tumors.

6. Use according to any one of the preceding claims,  
20 wherein said adenovirus has mutations in the VA RNA genes to obtain selective replication in tumor cells with an active Ras pathway or unresponsive to the action of interferon.

7. Use according to any one of the preceding claims,  
25 wherein said adenovirus has mutations in the VA RNA genes to obtain selective replication in tumor cells and modifications in its capsid to increase its infectivity or to direct it to a receptor present on a tumor cell.

more genes in the group Ela, Elb, and E4 to obtain selective replication in tumors.

5 9. A composition that comprises an adenovirus with genetic mutations in the VA RNA genes to obtain selective replication in tumor cells and modifications in its capsid to increase its infectivity or to direct it to a receptor present on a tumor cell.

10 10. A composition that comprises an adenovirus with genetic mutations in the VA RNA genes that confer selective replication on tumor cells and that, in turn, contain other genes commonly used in the field of cancer gene therapy such as prodrug activators, tumor suppressors, or immunostimulants.

15 11. A composition that comprises a human adenovirus derived from a serotype between 1 and 50 with genetic mutations in genes with VA RNAs that confer selective replication on tumor cells.

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8. Use according to any one of the preceding claims, wherein said adenovirus has mutations in the VA RNA genes that confer selective replication on tumor cells and that, in turn, contain other genes commonly used in the field of cancer gene therapy such as prodrug activators, tumor suppressors, or immunostimulants.

9. Use according to any one of the preceding claims, wherein said adenovirus is a human adenovirus derived from a serotype between 1 and 50 with genetic mutations in the VA RNAs genes that confer selective replication on tumor cells.

10. Use according to Claim <sup>9</sup>~~11~~, wherein said adenovirus is a human adenovirus derived from serotype 5.

11. Use according to Claims <sup>9</sup>~~11~~ to <sup>10</sup>~~12~~, wherein said adenovirus is a mutant adenovirus dl331.